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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/530,156 08/31/00 HECKER

O AP9472

010291 PM82/1016  
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BLOOMFIELD HILLS MI 48304-0610

EXAMINER
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BURCH, M	
ART. UNIT	PAPER NUMBER

3613  
DATE MAILED:

10/16/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

Commissioner of Patents and Trademarks

**Best Available Copy**

**Office Action Summary**

Application No.

09/530,156

Applicant(s)

HECKER ET AL.

Examiner

Melody M. Burch

Art Unit

3613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 August 2001.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 10-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 10-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore,
  - the means for monitoring the wheel brake pressure as claimed in claim 1,
  - a counter device as claimed in line 2 of claim 12; and
  - the wheel brake pressure in the third mode of operation being excessively elevated compared to the master cylinder pressure as claimed in lines 5-7 of claim 1 and discussed on pg. 5 lines 11-13 from the bottom must be shown or the feature(s) canceled from the claim(s) as the difference is shown, for example in figure 8 of U.S. Patent 5727852 to Pueschel et al. No new matter should be entered.

### ***Claim Objections***

2. Claims 10-19 are objected to because of the following informalities:
  - In line 1 of the claims "A" should be changed to --The--. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1 and 10-19 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Re: claim 1. Applicant has not provided adequate support in the originally filed specification to clearly convey the way in which Applicant accomplishes the process of "monitoring the wheel brake pressure in the third mode of operation" as claimed in line 6 of claim 1. In claim 13 line 2 Applicant mentions a sub step of the monitoring process which includes the incorporation of the formula found on pg. 6 of the specification; however, the discussion of a sub step suggests the presence of an overall monitoring process which was not discussed. The phrase "monitoring the wheel brake pressure" is also unclear to the Examiner since on pg. 5 lines 9-11 the specification states that "the pressure build-up is gradually diminished in dependence on the driver's intention sensed by means of the measured tandem master cylinder pressure" later on pg. 6 lines 9-10 it is again stated that "the wheel brake pressure  $p_{wheel}(t)$  ...[is] controlled dependent on a measured tandem master cylinder pressure  $p_{TMC}(t)$  during the dosage phase". The specification fails to provide clarification on the means by which the monitoring of brake pressure takes place (e.g. pressure sensor, strain gauges and an algorithm to correlate force or torque measured at the wheel with the brake pressure seen at the wheel); however, even if clarification were provided, it appears that the monitoring process comprises the monitoring of master cylinder brake pressure rather

than wheel brake pressure and that a sub step of that monitoring process includes the determination of wheel brake pressure from the monitored master cylinder pressure.

Re: claim 12. Applicant has not provided adequate support for the limitation of "a counter device" as claimed in line 2 of the claim.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re: claim 14. It is unclear to the Examiner what Applicant intends to claim with the use of the phrase "monotonously diminished". By definition, the term monotonous refers to something unvarying and both the specification (the last line of pg. 6) and the drawings (fig. 2) teach away from the definition of monotony.

### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 10-14, 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by DE-19501760 (corresponding to U.S. Patent 5727852 to Pueschel et al. for column, line, and figure numbers).

Re: claims 1, 10, 11, 14, and 17-19. DE-19501760 shows in figure 8 a method of operating a brake assist system which comprises a first mode shown from T0 to T1 in which the brake assist system is not actuated, a second mode of operation shown from T1 to T3 and disclosed in col. 9 lines 32-36 in which after recognition of an emergency brake situation (the exceeding of a threshold) a pressure build-up of wheel brakes is generated, and a third mode of operation shown from T3 to the end of the x-axis and disclosed in col. 9 lines 36-40 which is provided for the transition from the second into the first mode of operation, comprising the steps of: monitoring the wheel brake pressure in the third mode of operation via elements 80 and 85 shown in figure 1, determining when the monitored wheel brake pressure is excessively elevated compared to the tandem master cylinder pressure (via the monitoring of the difference between the wheel brake and master brake cylinder pressures by determining when the master brake cylinder pressure drops below a threshold as disclosed in col. 9 lines 35-40, and diminishing the amount of excess elevation in the course of time as shown in figure 8 from T3 to the end of the x- axis.

Re: claim 12. DE-19501760 discloses the use of a device that produces queries 750 and 760 which determine the relative amount the driver diminishes the brake pedal force as disclosed in col. 8 lines 42-45.

Re: claim 13. It is inherent that the ratio of the wheel brake pressure and the master brake cylinder pressure is equal to some time dependent constant of proportionality or momentary value as evident from the plot of figure 8.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE-19501760. Examiner maintains that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the step of declining the excess elevation function in time intervals in which the tandem master cylinder pressure is declining by producing a larger decline in wheel brake pressure to effect an overall decline of the difference between the master brake cylinder and wheel brake pressures. Similarly, Examiner maintains that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the step of keeping the excess elevation function constant in time intervals in which the tandem master cylinder pressure is increasing by producing an increase in wheel brake pressure equal to that of master cylinder pressure. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method of operating a brake assistant system of DE-19501760 to have included the steps listed above in order to provide alternate means of controlling the excess elevation between the master cylinder and wheel brake pressures in order to achieve desired brake control capabilities.

***Response to Arguments***

11. Applicant's arguments filed 8/13/01 have been fully considered but they are not persuasive.

With regards to the drawings filed 8/16/01 Examiner believes that since a comparison between the master cylinder pressure and wheel brake pressure is specifically claimed (in lines 2 and 3 from the bottom of claim 1), the difference between the two pressures should be clearly drawn as shown in figure 8 of DE-19501760.

Re: claim 1. Examiner maintains that DE-19501760 discloses the monitoring of the wheel brake pressure in the third mode of operation to the same extent as Applicant's. Just as Applicant states "the pressure build-up is gradually diminished in dependence on the driver's intention sensed by means of the measured tandem master cylinder pressure" and later on pg. 6 lines 9-10 again states that "the wheel brake pressure  $p_{wheel}(t)$  ...[is] controlled dependent on a measured tandem master cylinder pressure  $p_{TMC}(t)$  during the dosage phase". The wheel brake pressure is monitored via pressure sensors 80 and 85 as shown in figure 1 and the wheel brake pressure is monitored and controlled based on the master cylinder pressure or particularly the dropping of the master cylinder pressure below a specific threshold. Thus, it is evident that the wheel brake pressure is monitored and controlled via the monitoring of the master cylinder pressure as similarly disclosed by Applicant. Examiner also maintains that DE-19501760 shows the diminishing of the amount of excess elevation in the course of time. Although the diminishing process occurs abruptly, it still occurs in the



course of time as evident by the slope extending towards the right end of the x-axis shown in figure 8.

***Conclusion***

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

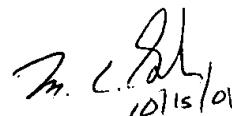
13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 703-306-4618. The examiner can normally be reached on Monday-Friday (7:30 AM-4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Oberleitner can be reached on 703-308-2569. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.

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14. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

mmb  
October 15, 2001

Handwritten signature of Matthew C. Graham, dated 10/15/01.

**MATTHEW C. GRAHAM**  
**PRIMARY EXAMINER**  
**GROUP 310**